

A SHORT
ACCOUNT
OF THE
PROGRESSES
OF THE
MOLE
AT TANGIER,

From the first beginning of that WORK.



His Majesty having declared the Earl of Tior, Governour of *Tangier*, and constituted certain Commissioners for the care of that place, about the year 1662. the business of building a Mole there was discussed in the presence of Engineers sent from *Genoa*, and others that could be found versed in such sort of work, and because *Tangier* was at that time only an open Bay, and that *Ches* could not be framed but in a secure Harbour, it was found of absolute necessity to begin the Work with great loose Rocks, after the manner that all other Moles are built, excepting the New Mole at *Genoa*. Many of the *Tangier* Lords declaring such a Work could never be carried well on, but by way of Contract, they gave encouragement to the said Earl of Tior, Sir John Lawson, and Mr. *Chabrey*, to enter into Articles for building the same by the Cubical Yard. Thirteen Shillings for every such

such Yard was the price asked, and as readily consented to, in so unusual a work there was no other measures to go by than such as the Contractors themselves laid down, who wanted not private assurance to secure them from the danger of such Accidents as might render the bargain over-hard on their side, nor were they indeed otherways mistaken in their measures, than from such contingent causes as could not be foreseen at first, viz. The softness of the Stone, which upon opening the Quarries wrought to half loss, the uncertainty of the Weather, and the very bad and dilatory payments by Tallies.

This Contract for building the Mole was signed in February 1662. and the first Payment began the tenth of April following.

It was no easie matter at this time to get Workmen to go to Tangier, because of the ill reputation the place had, from the Mortality of our Countrymen, and the great sufferings they at first met with. Mr. Cholmeley by the Interest he had in the North, and by going himself, prevailed with about forty Masons, Miners, and other proper Artists and Workmen to undertake the service, with whom he Arrived at Tangier about the beginning of June 1663. The place being destitute of all conveniencies; much of that Summer was spent in providing quarters for Men and Stores, and in putting together Engines prepared for the weighing Stones, so that it was the end of August when the first Foundation of the Mole was laid, soon after which the Earl of Tiviot went for England, and at his return, about the end of December, found the Mole advanced beyond his expectation, but Mr. Cholmeley being obliged to go for England in February, because of the death of his Elder Brother, who left a Son in Infancy, had not been long there, when news came of the loss of the Earl of Tiviot, chief of the Contractors, which occasioned Mr. Cholmeley to return for Tangier so soon as he could settle affairs, provide himself of Officers and Stores necessary, which delayed his Arrival there until January 1664. And then he found little work had been done in his absence, chiefly because the Workmen at the Mole, by reason of the loss the Garrison had with the Earl of Tiviot, were forced to the Duty of Soldiers, and because the Water Engines were found to be of little use, by reason of the frequent Levant Winds; this made Mr. Cholmeley soon alter the Method from Water to Land. Carriages drawn by Horses, and to build at the Quarries a little Town called *Whitby*, which contained Stables for a hundred Horses, large Magazines for all sorts of Stores, and Quarters for the Workmen

men and their Wives. He also advised Sir *John Lauson* of the many Impediments which made it impossible to carry on the Work at the rate of the Contract, which procured an Order of Council of the 31 of *March* 1665. by which His Majesty was pleased to explain the intentions of the Contract, so as to leave the Contractors free from danger of loss, and to reduce the Work to an Account, if the same were insisted upon.

Tangier was at this time under the Government of the Lord *Bellasis*, and the Mole advanced so well, that there was a Battery built upon it which did secure the Trade of the place from the attempts of the *Dutch*, but Sir *John Lauson* also dying in that War, the burthen of the Mole was left to Mr. *Cholmeley* the only surviving Contractor, whose Nephew dying about the same time, left unto him the business and the Estate of his Family, and this occasioned him to pass into *England* the end of this Year, having put the affairs of the Mole into an excellent Method, and left the care under knowing and intelligent Officers.

The Plague and the War did occasion that want of money, it was impossible to get any other payment than Tallies anticipated from 24 to 30 Months, so that Money could not be had but by additional security, which forced Stores to be bought at the worst hand, and the business to be carried on in the way of Trade, and much time to be spent barely in keeping Account of the Money and the Interest; and in the continual Negotiating the same by Tallies, which received no amendment, notwithstanding Sir *Hugh Cholmeley* his daily complaints.

The Earl of *Sandwich* being called from *Madrid* in the Year 1668. had Instructions to call at *Tangier*, and take a Survey of the Mole, which he did in the Month of *August* by the help of one Mr. *Skere*, and at his return to Court towards the end of that Year reported the same to be 380 Yards in length, carried on by the Conduct of Excellent Officers, and under such a good Economy as could not well be mended: But the Work of the Mole being now carried into so deep Water that there was a possibility of building with Chests, and some necessity appearing to proceed in the future Work in a more solid way than the Contract seemed to oblige, the carrying on of the Work was reduced into an Office by Order of the King in Council, dated the 27 of *August* 1669. under the care of Sir *Hugh Cholmeley* as Surveyor General, who framed the method for governing the Work, and issuing the Money under such Checqs, and so well to the liking

of the *Tangier* Lords, and the Lords of the Treasury, that upon the greatest disquisition it hath not since met with one single amendment.

Some time before this settlement there was noise of breaches at *Tangier*, which occasioned discourses of the necessity of building with Chests, and obliged Sir *Hugh Cholmeley* to frame two Chests for a tryal under the Survey of Mr. *Shere* a Gentleman, Sir *Hugh* had lately entertained, who was experienced in such Works, and under whose care they were sent to *Tangier*, from whence Mr. *Shere* embarks for *Genoa*, to take exact observations of their proceedings, at his return to *Tangier* gives his advice for building an inner Mole with Chests, and for Protection of this an outward Work in dimensions much greater than that which was Contracted for, and in the same way advised Sir *Hugh* at his arrival at *Tangier*, April following, to proceed upon the repair of the Work. The Work with Chests seemed to Sir *Hugh* superfluous, because it required an outward one for protection of it, and this was proposed to be made of Stones from 25 to 30 Tun each, which by reason of the continual agitations of the Seas was at *Tangier* wholly unpracticable: He therefore immediately applied himself to the repair of the Work by Artificial Pillars of about 100 Tun in bigness, which suddenly secured about 50 Yards of the side that was most exposed, and the end of the Work he secured by one of the great Chests he had sent from *England*.

About the Month of *July*, this Year, Sir *Hugh* received a Letter from the Lords Commissioners for the Affairs of *Tangier*, taking notice of the ill reports they heard of the Mole, and commanding the matter to be discussed in the presence of the Chief on the place, and be proceeded in the way should be generally approved. The chief Officers of the Garrison, the best of the Citizens and Commanders of Ships being summoned, the whole matter was discussed in the presence of his Excellency my Lord *Howard*, now Duke of *Norfolk*, the Earl of *Middleton* and the Mayor of the place, Mr. *Shere* being also present, who all unanimously concluded the present practice with Pillars was the most probable expedient for the repair, and that if the same resisted the Storms of the approaching Winter, the work ought to be carried on in the same way for the future, and to this purpose signed a Letter to the Lords Commissioners under all their hands. The Work continued to resist the Sea, not only the following, but many Winters, so that the present practice gave satisfaction almost to every man, excepting Sir *Hugh* himself, who did then declare

declare that the Work was such as he was able to carry on under the exceeding bad payments with which it laboured, but such as could not be of lasting continuance. And having for above two years managed the Work almost wholly without money upon his own credit, was forced to return to *England* the beginning of the Year 1672. where the Wars made Arrears impossible to get, beside that the trouble in soliciting for money, and Accounting for the same, caused such an Attendance as was incompatible with the Service at *Tangier*.

The Winter ending, the Year 1674. brought news of some breaches at *Tangier*, which Sir *Hugh* being much troubled to hear, and assured within himself he knew to cure the Evil, so as would take off all future complaints, if the want of money, and perplexities of an Exchequer Account could give him leave to go to *Tangier*, offered unto the Lords in the Year 1674. certain proposals whereby he undertook both to repair the present Work, and to carry it 100 Yards farther into the Sea, by which means there would be a Harbour for Ships to ride safely in four Fathom at low Water, and all this to be done in six Years, for the Annual Establishment, and though he could not give security for the whole Sum, he offered to give, from Year to Year, security for the Money he should receive; and to be punished or rewarded according to his yearly performance. Mr. *Shere* taking advantage of these proposals, framed others, by which he undertook the Work at 10000 *l.* less in the whole; and with great upright Chests, maintaining that Figure best against the reflux Sea; whereas by Sir *Hugh's* offers the same was to be done in solid Work, and with Chests too, yet so placed that the force of the Sea should be wholly dissipated by a slope and gradual interception of the Waters, after the imitation of Nature, that from this position doth in many places guard the Coast merely by a bank of Sand. At the same time the Lord Privy Seal gave in other Propositions from certain Artists who offered to do the Work at a much cheaper rate than that proposed by Mr. *Shere*, and to give 60000 *l.* security for their performance, but Mr. *Shere* had the preference, and without security is trusted with the issuing and paying of the Money with a ^{yearly} reward of 2000 *l.* if he performs and nothing if he fails in the same.

Sir *Hugh* was happy in the greatest exigency of the Work, and upon the most severe Enquiries to hit upon such expedients for the repair and advance as gave satisfaction to Mr. *Shere*, and all upon the

place without one dissenting man, and this after Mr. *Shere* had been at *Genoa*, and considered the way of their practice, it had been no unusual thing for one that had been so many years trained in the Work under Sir *Hugh* to profit himself upon such defects as he might have observed. Let us then take a view of the present state of the Work, by which we shall see how far Mr. *Shere* hath exceeded or come short of Sir *Hugh* his proposals, or how near he hath hitherto complied with his own undertakings.

Sir *Hugh* having carried the Mole 500 Yards into the Sea, within which there was about 18 foot depth at low Water, was very desirous to leave the same compleat and finished, that so it might have had comparison with any future Work. He offered for one Years establishment to compleat the Repair, and to finish the same, as well on the inside as outward, and to carry it farther 15 Yards into the Sea, and to give security to do all this in so substantial a way, as upon view and Tryal should be judged and found durable; and in case of failure, to pay back the whole Money, or as much as should be judged the deficiency might amount unto. But it was concluded that this Repair should also be undertaken by Mr. *Shere*, who having now received 60000 *l.* and spent three years last Midsummer about the same, we hear hath repaired the old Work, but there was not at Midsummer one foot advanced into the Sea, nor will the expence of another Year, at his rate of Work, scarce finish that which Sir *Hugh* offered to give security to do for one Years allowance; yet Mr. *Shere* computes he hath every Year performed his complement of Work, which was 30 Yards yearly in length, until the whole were finished, and possibly he may have done so according to the Numerical quantity of Cubical Yards contained in the Chests placed; but certainly there is much more Work to secure the Foundations of his Chests, and that according to his own Proposals, than barely the placing and filling the same: And what Mr. *Shere* hath done in the Years past will be best understood by the Progress of his future Work; if in other three Years he can compleatly finish ninety Yards in length, which is his undertaking, then may it be concluded, the past Work, though it comes much short of what Sir *Hugh* offered security to perform, is yet in proportion to his own Agreements. And now that the Work done by Sir *Hugh* is compleatly finished and made durable by Mr. *Shere* himself. Sir *Hugh* will allow he was mistaken in his measures, if the future Work be done in proportion any thing cheaper; but if it shall happen to cost

the King much more than the past Work now repaired hath donè; Sir *Hugh* humbly conceives the way of building is nothing improved, and that it had been better to have continued the Work in the old way, and afterwards to have secured it as Mr. *Shere* hath done the past Work, than to prosecute it in a way much more costly, and by confession of himself no less durable; Sir *Hugh* was for building with Chests as well as Mr. *Shere*, he differed only in the way of placing these Chests, which Sir *Hugh* proposed by several Rows, one set within the other, gradually breaking and intercepting the Sea, Mr. *Shere* maintained, and undertakes to do the Work by one solid Body, and an upright side, which from its own strength should secure the Work without any other outward Work or Defence whatever; to this Sir *Hugh*'s Objections were, the difficulty of placing these Chests close one to the other, as at *Genoa*, and the danger of the Works falling when the Worm had consumed the Wood of the Chest: By what hath been practised it is plain the Chests cannot be close joyned scarce nearer than four foot one to the other, which occasions the supplying the vacancy with a small Chest, which hath little substance, and therefore must occasion many fears, and for the great Chests, they are made of such strong Plank, and so bound with Timber, that it is not possible for the Worm suddenly to destroy them, and it is plainly demonstrable, that if the Chests were filled with Sand, they cannot possibly give way whilst the Wood Work continues unperished, and therefore no tryal of the Work can be suddenly expected; but if Mr. *Shere* be obliged to secure his great Chests by other lower Chests set outwards towards the Sea, then whatever he may pretend, his proceeding is directly according to Sir *Hugh*'s Proposal, only in the way of a far greater and needless expence by all the cost of the great Chest, which is plainly demonstrable from the solidity of the old Work, built without Chests, and made durable by means of such an outward Work as in the foresaid case is presumed necessary to secure the present Work with great Chests.

It is not the Intention of this Paper to diminish ought from Mr. *Shere*, whose diligence Sir *Hugh* heartily wishes may have all encouragement in so publick a Work; but not being conscious by the Progress since he left the Work, or by the future advance, that it will appear he hath any ways mis-employed the Kings Money, he thought it not unreasonable, in order to his own Justification, to set down this short Narrative of the whole Affair. Written in the Year 1679.

F I N I S.